



# Electronic Communications and Computer Engineering MSc

**This MSc provides advanced training in electronics, communications and computer engineering. It will give students a comprehensive coverage of the skills required by an engineer working in instrumentation, electronic systems, wireless and wired telecommunications, computer hardware, and software aspects of computer engineering.**

The course provides an excellent basis for engineers wishing to update their knowledge, students who wish to go on to do research, or for first degree students wishing to enhance their training.

Students will develop:

- the design, analytical and critical powers in relation to hardware and software aspects of complex electronic systems
- the ability to plan and undertake an individual project
- interpersonal communication and professional skills
- the ability to communicate ideas effectively in written reports
- decision making powers in relation to the specification and solution of embedded system design, system-on-chip (SoC) and electronic engineering problems for appropriate electronic systems and computer systems



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## Course structure

This masters course is taught on a full-time basis over one year and is also offered as a Postgraduate Diploma which follows the same taught modules but does not undertake the research project. The course consists of 120 credits of taught modules and a 60 credit independent research project. Please be aware modules are subject to change.

### Group 1 - At least 90 credits

#### Autumn semester

HDL for Programmable Logic with/without project	20/10 credits
Engineering Ultrasonics with/without project	20/10 credits
Instrumentation and Measurement with/without project	20/10 credits
Optical Communications and Networks	10 credits
Applied Computational Engineering	10 credits

#### Spring semester

Mobile Communications with/without project	20/10 credits
Digital Signal Processing for Telecommunications, Multimedia and Instrumentation with/without project	20/10 credits
RF Microelectronics with/without project	20/10 credits

#### Full year

Optical Communications	20 credits
Applied Computational Engineering	20 credits
Integrated Photonics: Design & Technology	30 credits

### Group 2 - Maximum of 30 credits

#### Autumn semester

Digital Communications	10 credits
Electronic Design	10 credits
Solid State Devices	10 credits
Control Systems Design	10 credits
Microwave Communications	10 credits
Power Electronic Design	10 credits
Embedded Computing	10 credits
Bioelectronic and Biophotonic Interfacing	10 credits

#### Spring semester

Web Based Computing	10 credits
VLSI Design	10 credits
Telecommunication Electronics	10 credits
Photonics: Modelling, Analysis and Design	20 credits

#### Full year

Integrated Photonics: Design and Technology	30 credits
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### Individual project

Following the successful completion of the taught modules, an individual research project is undertaken during the summer term. The project will demand the completion of a major piece of work on an advanced technical topic.

Previous research projects on this course have included:

- solutions to current limitations of pulse-echo ultrasonic testing for non-destructive evaluation
- ultrasonic measurement of the viscoelastic properties of gels
- application of guided wave techniques for advanced material characterisation

## Funding opportunities

Find out more about funding options at:

[www.nottingham.ac.uk/graduateschool/funding](http://www.nottingham.ac.uk/graduateschool/funding)

## Employment prospects

Students of this course have entered into roles in design and development within major international companies or government agencies, obtained consultancy posts with leading contract consultant companies and moved into successful academic careers.

## Entry requirements

Applicants should have at least a 2:2 honours degree (or international equivalent) in a related subject from a recognised university.

English language requirements:

- IELTS score of at least 6.0 with a minimum score of 5.5 in individual elements

Other qualifications are accepted and exceptions are sometimes made for students who have had their education entirely in the medium of English and where English is a well-established second language.

## How to apply

Candidates are encouraged to apply online at:

<https://pgapps.nottingham.ac.uk>

## Contact us

For further information, please contact:

PGT Admissions  
Department of Electrical and Electronic Engineering  
t: +44 (0)115 95 15600  
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**To request this information in an  
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**t: +44(0)115 951 4591**

**e: [alternativeformats@nottingham.ac.uk](mailto:alternativeformats@nottingham.ac.uk)**